searching an information element database to find an information element linked with the parent identifier; and

retrieving the information element linked to the parent identifier.

49. (New) A method for the retrieval of symbolically linked information, comprising:

receiving an input symbol;

normalizing the input symbol, based on a context of the input symbol, to generate a normalized symbol;

searching a master symbol database using the normalized symbol to find a matching master symbol and a parent identifier linked to the master symbol;

searching an information element database to find an information element linked with the parent identifier; and

retrieving the information element linked to the parent identifier.

REMARKS

I. INTRODUCTION

Claims 43-49 have been added. Claims 1-49 are pending in the present application. Claims 1-42 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 1-4, 14, 15, 41 and 42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,122,635 to Burakoff et al ("Burakoff"). Claims 5-11, 16-22 and 30-36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Burakoff in view of U.S. Patent 5,940,843 to Zucknovich et al. ("Zucknovich"). Claims 12, 13, 23-29 and 37-40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Burakoff in view of U.S. Patent 6,236,980 to Reese ("Reese"). No new matter has been added. Applicants respectfully submit that all of the presently pending claims are allowable in view of the following remarks. Reconsideration of the present application is requested.

II. REJECTIONS UNDER 35 U.S.C. § 101 SHOULD BE WITHDRAWN

In order to reject a claim under 35 U.S.C. § 101, the Examiner has "the burden to establish a *prima facie* case that the claimed invention as a whole is directed to solely an abstract idea or to manipulation of abstract ideas or does not produce a useful result. Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101." MPEP § 2106.

Applicants respectfully assert that the Examiner's explanation that the claims were rejected because "the claimed invention does not fall within the technological arts because no form of technology is discussed or claimed" does not meet the burden of establishing a *prima facie* case under 35 U.S.C. § 101.

The claims of the present invention produce a "useful, concrete and tangible result" and thus are statutory subject matter under 35 U.S.C. 101. For example, independent claims 1, 12, 25 and 41 relate to methods for storing and retrieving information based on a master symbol database such that information is properly stored and retrieved even when referenced by an ambiguous input symbol. Furthermore, independent claims 37, 39 and 42 are directed to physical structure for storing and retrieving information based on a master symbol database such that information is properly stored and retrieved even when referenced by an ambiguous input symbol. For example, claim 37 recites a storage device, a network interface and a processor adapted to electronically archive documents based on an input symbol.

Since the claims of the present application produce a "useful, concrete and tangible result," the Examiner's rejection under 35 U.S.C. § 101 should be withdrawn.

III. REJECTIONS UNDER 35 U.S.C. § 103(a) SHOULD BE WITHDRAWN

Applicants respectfully note that some of the Examiner's rejections under 35 U.S.C. § 103 are logically inconsistent. For example, the Examiner has rejected independent claim 12 in view of two references (Burakoff and Reese) but has rejected claims 14 and 15, which depend from claim 12 and thus include all of the limitations of claim 12, based only on one reference (Burakoff). Similarly, claims 16-22, which also depend from claim 12, have been rejected based on the Burakoff and Zucknovich references while claim 12 has been rejected based on the Burakoff and Reese references. A similar issue exists with regard to the rejections of claim 25 and claims 30-36. Nevertheless, Applicants will address the rejections

below.

In order to reject a claim for obviousness under 35 U.S.C. § 103, the prior art must teach or suggest each and every element of the claim and must also suggest combining the elements in the manner contemplated in the claim. See Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934 (Fed. Cir.), cert. denied 111 S. Ct. 296 (1990); In re Bond, 910 F.2d 831, 834 (Fed. Cir. 1990).

Burakoff describes a computer-assisted method for manipulating securities information. According to Burakoff, one aspect of the invention is a computer-assisted method for manipulating securities information. The method includes the steps of acquiring securities information from one or more database sources, identifying one or more portions of the acquired securities information as relating to a particular security, and creating a computer-readable file having the identified portions. In the Burakoff system, both companies and securities are expected to be referenced using unique identifiers, for example, a company name to identify a company or a CUSIP number or stock ticker symbol to identify a security. A CUSIP number is a unique number assigned by Standard & Poor's CUSIP Service Bureau, to identify a security. A stock ticker symbol is a symbol assigned by a stock exchange (and unique to that stock exchange) to identify a security.

The Burakoff system then describes using these identifiers to match information to a particular company or security. For example, in one embodiment, a securities submission source is first queried to extract all the files associated with a particular company using an identifier. Burakoff also describes a method for retrieving compliance information by receiving an identifier unique to a particular security (e.g., a CUSIP nhumber or stock ticker symbol), and transmitting compliance information for the security specified by the identifier. Burakoff also describes a cataloging subsystem which presents a system operator with securities submissions. The system operator inspects each submission and catalogs it according to the information it contains by identifying the particular securities about which the submission contains compliance information. An internal identification number, CUSIP identifiers and stock ticker symbols are used to identify particular securities. The system described in Burakoff always relies on a known, unique identifier when it is relating a query or information item to a particular security or company.

Reese relates to a computer apparatus for automatically generating displays or reports containing investment security or element recommendations. According to Reese, the user

selects a security by use of a security selection means. The computer apparatus then processes the request utilizing the programmed algorithms to construct the first subset of information. This first subset consists of the recommendations for the security selected for the predetermined date range. The computer apparatus utilizes a Microsoft Access select query to construct the fist subset. Through the utilization of the criteria based upon the selection of the user the selected query is able to retrieve just the recommendations for the security chosen for the predetermined date range. For example, if a user enters the ticker symbol WDC, the computer apparatus will retrieve from the Recommendation Data Set the recommendations captured for Western Digital (WDC). The first subset will consist of the unique ID number of the recommendations found within the Access database. Similar to Burakoff, Reese relies on a known, unique identifier to perform queries relating to the security associated with that identifier.

The present application relates to a method and system for the reference, archival and retrieval of symbolically linked information in an environment of idiosyncratic symbol usage. As described in the specification, according to one embodiment of the present invention, a master symbol database stores a plurality of master symbols. Each master symbol in the master symbol database is linked to a parent identifier that identifies a unique object. Master symbols stored in the master symbol database are stored in a normalized format to provide a consistent method of referencing and searching the master symbol database.

In contrast to Burakoff and Reese, in the system described in the present application, potentially ambiguous symbols are individually processed to generate unique master symbols that correspond to a unique parent identifier. For example, as described in the present application, the stock ticker symbol "T" refers to an AT&T security in the United States, but in Canada "T" refers to a security of the Telos company. The AT&T "T" symbol and the Telos "T" symbol are processed to generate unique master symbols which correspond to unique parent identifiers for AT&T and Telos, respectfully. Each master symbol may consist of a number of segments, each segment of which is a field which describes a characteristic of the security the master symbol is for. For example, one of the segments may be for the country that the security is from and may be filled by the string "US" for United States or "GB" for Great Britain. These master symbols and parent identifiers are stored in a master symbol database.

When information (e.g., a financial document) is received about a security, an input

symbol received with or as part of the information is used to determine which security the information relates to. In order to accomplish this determination accurately, the input symbol is normalized by, for example, putting it into the segmented form used for the master symbols, even though the proper value for all of the segments may not be resolved from the input symbol alone. The master symbol database is then searched for a single master symbol which matches the normalized symbol. If a single match is made then the information can be linked with the parent identifier of the matched master symbol. If a single match cannot be made, the system can attempt to fill in information for the unresolved segments of the normalized symbol. For example, information about the contributor of the financial document (e.g., historical patterns from the contributor's previous submissions) may be used to fill in the unresolved fields and the search in the master symbol database may be run again.

When a query for information (e.g., financial documents) regarding a particular symbol (e.g., a stock ticker symbol) is received, a similar process may be followed to match the symbol to a parent identifier by normalizing the symbol and searching for a match in the master symbol database.

Claims 1-4, 14 and 15

Claims 1-4, 14 and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Burakoff. Applicants respectfully submit that these rejections should be withdrawn.

Claim 1 as amended recites:

> A method for storing and referencing symbolically linked information comprising the steps of:
>
> *processing a symbol to generate a master symbol formatted according to a predetermined structure*;
>
> determining a unique parent identifier corresponding to the master symbol;
>
> storing the parent identifier and the master symbol in a master symbol database wherein the master symbol is linked to the parent identifier;
>
> storing at least one information element wherein the at least one information element is linked to the parent identifier.

As explained above, Burakoff uses known, unique symbols to perform its operations. Burakoff does not generate any symbols, but rather uses preexisting symbols. In contrast, for example, one of the embodiments described in the present application processes a symbol to generate a master symbol which has a predetermined structure of text string segments. Thus, the Examiner's rejection of claim 1 should be withdrawn for at least the reason that Burakoff does not describe

"processing a symbol to generate a master symbol formatted according to a predetermined structure." Claims 2-4 depend from claim 1. Thus, claims 2-4 are allowable for at least the reasons that claim 1 is allowable. The Examiner's rejection of claims 2-4 should be withdrawn.

Claims 14 and 15 are dependent on claim 12 which recites:

> A method for the archival of symbolically linked information comprising the steps of:
>
> receiving an information element and at least an input symbol;
>
> *normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure*;
>
> *searching a master symbol database using the normalized symbol to find a matching master symbol and linked parent identifier*; and
>
> storing at least the parent identifier and the information element so that the parent identifier is linked to the information element.

As explained above, the input symbols used by Burakoff to perform its operations are known, unique symbols. Burakoff at least does not describe "normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure" or "searching a master symbol database using the normalized symbol to find a matching master symbol and linked parent identifier" and therefore cannot render claim 12 unpatentable. Since claims 14 and 15 are dependent on claim 12, they include all the limitations of claim 12, thus the Examiner's rejection of claims 14 and 15 should be withdrawn.

Claims 5-11, 16-22 and 30-36

Claims 5-11, 16-22 and 30-36 stand rejected under 35 U.S.C. § 103 as being unpatentable over Burakoff in view of Zucknovich. Applicants respectfully submit that these rejections should be withdrawn.

Claims 5-11 are dependent on claim 1 and therefore include all the limitations of claim 1. As explained above, Burakoff at least does not describe "processing a symbol to generate a master symbol formatted according to a predetermined structure." Zucknovich also does not describe "processing a symbol to generate a master symbol formatted according to a predetermined structure," nor does the Examiner contend that it does. Furthermore, Applicants respectfully disagree with the Examiner that Zucknovich teaches a master symbol structured according to a symbol template and including symbol segments or symbol fields. The sections cited by the Examiner describe using template forms to complete searches of a

database. The symbols discussed are only used as parameters in the form – there is no disclosure of the symbols being structured according to a symbol template. For at least the reasons discussed above, the Examiner's rejection of claims 5-11 should be withdrawn.

Claims 16-22 are dependent on claim 12 and therefore include all the limitations of claim 12. As explained above, Burakoff at least does not describe "normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure" or "searching a master symbol database using the normalized symbol to find a matching master symbol and linked parent identifier." Zucknovich also does not describe "normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure" or "searching a master symbol database using the normalized symbol to find a matching master symbol and linked parent identifier," nor does the Examiner contend that it does. For at least the reasons discussed above, the Examiner's rejection of claims 16-22 should be withdrawn.

Claims 30-36 are dependent on claim 25 and therefore include all the limitations of claim 25. Claim 25, as amended, recites:

> A method for the retrieval of symbolically linked information, comprising the steps of:
>
> receiving an input symbol;
>
> *normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure*;
>
> *searching a master symbol database using the normalized symbol to find a matching master symbol and a parent identifier linked to the master symbol*;
>
> searching an information element database to find an information element linked with the parent identifier; and
>
> retrieving the information element linked to the parent identifier.

As explained above, the input symbols used by Burakoff to perform its operations are known, unique symbols. Burakoff at least does not describe "normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure" or "searching a master symbol database using the normalized symbol to find a matching master symbol and a parent identifier linked to the master symbol." Zucknovich also does not describe "normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure" or "searching a master symbol database using the normalized symbol to find a matching master symbol and a parent identifier linked to the master symbol,"

nor does the Examiner contend that it does. For at least the reasons discussed above, the Examiner's rejection of claims 30-36 should be withdrawn.

Claims 12, 13, 23-29 and 37-40

Claim 12, as amended, recites:

> A method for the archival of symbolically linked information comprising the steps of:
>
> receiving an information element and at least an input symbol;
>
> *normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure*;
>
> *searching a master symbol database using the normalized symbol to find a matching master symbol and linked parent identifier*; and
>
> storing at least the parent identifier and the information element so that the parent identifier is linked to the information element.

As explained above, Burakoff at least does not describe "normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure" or "searching a master symbol database using the normalized symbol to find a matching master symbol and linked parent identifier." The input symbols used by Reese to perform its operations are known, unique symbols and Reese does not perform any normalization to the input symbols. Thus Reese does not describe "normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure" or "searching a master symbol database using the normalized symbol to find a matching master symbol and linked parent identifier." Since neither Burakoff or Reese describe "normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure" or "searching a master symbol database using the normalized symbol to find a matching master symbol and linked parent identifier," they cannot render claim 12 unpatentable. Thus, the Examiner's rejection of claim 12 should be withdrawn.

Claims 13, 23 and 24 depend from claim 12, thus those claims are allowable for at least the reasons that claim 12 is allowable.

Claim 25, as amended, recites:

> A method for the retrieval of symbolically linked information, comprising the steps of:
>
> receiving an input symbol;
>
> *normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure*;

searching a master symbol database using the normalized symbol to find a matching master symbol and a parent identifier linked to the master symbol;

searching an information element database to find an information element linked with the parent identifier; and

retrieving the information element linked to the parent identifier.

As explained above, neither Burakoff or Reese describe "normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure" or "searching a master symbol database using the normalized symbol to find a matching master symbol and a parent identifier linked to the master symbol," thus, they cannot render claim 25 unpatentable. The Examiner's rejection of claim 25 should be withdrawn.

Claims 26-29 depend from claim 25, thus those claims are allowable for at least the reasons that claim 25 is allowable.

Claim 37 recites:

A document repository system allowing electronic archival of documents using an input symbol comprising:

a storage device;

a network interface;

a processor coupled to the storage device, said processor adapted to:

store a database of master symbols, wherein each master symbol is linked to a parent identifier and a document database;

receive an input symbol and a document via the network interface,

normalize the input symbol to obtain a normalized input symbol formatted according to a predetermined structure,

search the master symbol database using the normalized input symbol to find a matching master symbol and a linked parent identifier,

store the document in the document database so that the document is linked to the parent identifier.

As explained above, the input symbols used by Reese and Burakoff to perform their operations are known, unique symbols. They do not describe a "processor adapted to" "normalize the input symbol to obtain a normalized input symbol formatted according to a predetermined structure" or "search the master symbol database using the normalized input symbol to find a matching master symbol and a linked parent identifier." Thus, the

Examiner's rejection of claim 37 should be withdrawn. Claim 38 depends from claim 37, thus claim 38 is allowable for at least the reasons that claim 37 is allowable. The Examiner's rejection of claim 38 should be withdrawn.

Claim 39 of the present application recites:

> A document repository system allowing electronic retrieval of documents using an input symbol, comprising:
>
> a storage device storing a master symbol database and a document database, the master symbol database storing master symbols, wherein each master symbol is linked to a parent identifier, and the document database storing documents linked to a parent identifier;
>
> a network interface;
>
> a processor, which:
>
> receives an input symbol via the network interface,
>
> *normalizes the input symbol to obtain a normalized input symbol formatted according to a predetermined structure,*
>
> *searches the symbol database using the normalized input symbol to find a matching master symbol and a linked parent identifier*, and
>
> retrieves documents from the document database that are linked to the parent identifier.

As explained above, the input symbols used by Reese and Burakoff to perform their operations are known, unique symbols. They do not describe "a processor which" "normalizes the input symbol to obtain a normalized input symbol formatted according to a predetermined structure" or "searches the symbol database using the normalized input symbol to find a matching master symbol and a linked parent identifier." Thus, the Examiner's rejection of claim 39 should be withdrawn. Claim 40 depends from claim 39, thus claim 40 is allowable for at least the reasons that claim 39 is allowable. The Examiner's rejection of claim 40 should be withdrawn.

Claims 41 and 42

Applicant notes that the Examiner did not explicitly reject claims 41 and 42, but based on the discussion on page 15 of the Office Action, the Applicant has assumed that the Examiner intended to reject them under 35 U.S.C. § 103 in view of Burakoff.

Claim 41 of the present application recites:

> A method for storing and referencing symbolically linked information in an environment wherein a plurality of different symbols are conventionally utilized to refer to a single entity,

comprising the steps of:

receiving a plurality of input symbols, each pertaining to a same single entity;

for each of the plurality of input symbols, generating a normalized master symbol formatted according to a predetermined structure;

determining a unique parent symbol corresponding to the master symbols;

storing the parent symbol and the plurality of master symbols in a master symbol database wherein each of the plurality of normalized master symbols is linked to the parent symbol.

Claim 42 of the present application recites:

A document repository system allowing electronic retrieval of documents related to a plurality of entities, each of the entities conventionally referred to utilizing a plurality of different symbols comprising:

a processor, wherein the processor is adapted to:

receive a plurality of input symbols, each pertaining to a same single entity;

for each of the plurality of input symbols, generate a normalized master symbol formatted according to a predetermined structure;

determine a unique parent symbol corresponding to the master symbols;

store the parent symbol and the plurality of master symbols in a master symbol database wherein each of the plurality of normalized master symbols is linked to the parent symbol.

As explained above, both Reese and Burakoff use known, unique symbols to perform their operations. They do not describe "generating a normalized master symbol formatted according to a predetermined structure." Thus, the Examiner's rejection of claims 41 and 42 should be withdrawn.

IV. CONCLUSION

It is respectfully submitted that the application is in condition for allowance, and Applicants request reconsideration and withdrawal of all grounds of rejection.

A Notice of Allowance is respectfully requested.

The Office is hereby authorized to charge any additional fees or credit any

overpayments under 37 C.F.R. §1.16 or §1.17 to Deposit Account No. 11-0600.

The Examiner is invited to contact the undersigned at (212) 425-7200 to discuss the application.

Respectfully submitted,

Dated: April 2, 2003

By: _____
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Version With Markings To Show Changes Made

1. (Amended) A method for storing and referencing symbolically linked information comprising the steps of:

processing a symbol to generate a master symbol formatted according to a predetermined structure;

determining a unique parent identifier corresponding to the master symbol;

storing the parent identifier and the master symbol in a master symbol database wherein the master symbol is linked to the parent identifier;

storing at least one information element wherein the at least one information element is linked to the parent identifier.

12. (Amended) A method for the archival of symbolically linked information comprising the steps of:

receiving an information element and at least an input symbol;

[processing] normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure;

searching a master symbol database using the normalized symbol to find a matching master symbol and linked parent identifier; and

storing at least the parent identifier and the information element so that the parent identifier is linked to the information element.

25. (Amended) A method for the retrieval of symbolically linked information, comprising the steps of:

receiving an input symbol;

[processing] normalizing the input symbol to generate a normalized symbol formatted according to a predetermined structure;

searching a master symbol database using the normalized symbol to find a matching master symbol and a parent identifier linked to the master symbol;

searching an information element database to find an information element linked with the parent identifier; and

retrieving the information element linked to the parent identifier.

37. (Amended) A document repository system allowing electronic archival of documents using an input symbol comprising:

a storage device;

a network interface;

a processor coupled to the storage device, said processor adapted to:

store a database of master symbols, wherein each master symbol is linked to a parent identifier and a document database;

receive an input symbol and a document via the network interface,

[process] normalize the input symbol to obtain a normalized input symbol formatted according to a predetermined structure,

search the master symbol database using the normalized input symbol to find a matching master symbol and a linked parent identifier,

store the document in the document database so that the document is linked to the parent identifier.

39. (Amended) A document repository system allowing electronic retrieval of documents using an input symbol, comprising:

a storage device storing a master symbol database and a document database, the master symbol database storing master symbols, wherein each master symbol is linked to a parent identifier, and the document database storing documents linked to a parent identifier;

a network interface;

a processor, which:

receives an input symbol via the network interface,

[processes] normalizes the input symbol to obtain a normalized input symbol formatted according to a predetermined structure,

searches the symbol database using the normalized input symbol to find a matching master symbol and a linked parent identifier, and

retrieves documents from the document database that are linked to the parent identifier.

41. (Amended) A method for storing and referencing symbolically linked information in an environment wherein a plurality of different symbols are conventionally utilized to refer to a

single entity, comprising the steps of:

receiving a plurality of input symbols, each pertaining to a same single entity;

for each of the plurality of input symbols, generating a normalized master symbol formatted according to a predetermined structure;

determining a unique parent symbol corresponding to the master symbols;

storing the parent symbol and the plurality of master symbols in a master symbol database wherein each of the plurality of normalized master symbols is linked to the parent symbol.

42. (Amended) A document repository system allowing electronic retrieval of documents related to a plurality of entities, each of the entities conventionally referred to utilizing a plurality of different symbols comprising:

a processor, wherein the processor is adapted to:

receive a plurality of input symbols, each pertaining to a same single entity;

for each of the plurality of input symbols, generate a normalized master symbol formatted according to a predetermined structure;

determine a unique parent symbol corresponding to the master symbols;

store the parent symbol and the plurality of master symbols in a master symbol database wherein each of the plurality of normalized master symbols is linked to the parent symbol.